

AMERICAN CYANAMID CO.  
PARSIPPANY, NJ 07054

MATERIAL SAFETY DATA SHEET

MSDS NO. AG09938-6  
CAS NO. 081335-47-9

DATE: JUN 02, 1997

EMERGENCY TELEPHONE: (973)-683-3100 (U.S.A.)

PRODUCT  
IDENTIFICATION

TRADE NAME: SCEPTER<sup>(R)</sup> 70 DG

SYNONYMS: 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-  
5-oxo-1H-imidazol-2-yl]-3-  
quinolinecarboxylic acid; AC252,214;  
Imazaquin; SCEPTER<sup>(R)</sup> 70DG  
Eco-Pac; CL252,214

CHEMICAL FAMILY: Imidazolinone

MOLECULAR FORMULA: C<sub>17</sub>H<sub>17</sub>O<sub>3</sub>N<sub>3</sub>

MOLECULAR WEIGHT: 311.340

USAGE: Herbicide

WARNING  
STATEMENTS

CAUTION! KEEP OUT OF REACH OF CHILDREN.  
Avoid contact with skin, eyes and clothing.

INGREDIENTS

COMPONENT	CAS. NO.	%	PEL/TLV
Imazaquin	081335-47-9	70.00	5 mg/m <sup>3</sup>
Technical			
Inerts		30.00	

REFERENCE: Imazaquin Technical American Cyanamid 1988  
Inerts

PHYSICAL  
PROPERTIES

APPEARANCE AND  
ODOR: Solid granules, off-white to light  
beige; slightly nutty odor

BOILING POINT: Not Applicable

MELTING POINT: 219°-222°C (technical)

VAPOR PRESSURE: Not Applicable

BULK DENSITY: > 25 lb. per ft<sup>3</sup>

VAPOR DENSITY: Not Applicable

% VOLATILITY  
(BY VOL.): Not Applicable

OCTANOL/H<sub>2</sub>O Not Applicable

PARTITION COEF:

PH: 4.0-4.6 (measured by mixing 0.14 g  
with 100 ml H<sub>2</sub>O)

SATURATION IN Not Applicable  
AIR (BY VOL.):

EVAPORATION RATE: Not Applicable

SOLUBILITY IN WATER: 60 ppm at 25°C (Technical)

FIRE AND  
EXPLOSION  
HAZARD  
INFORMATION

FLASH POINT: Not Applicable

FLAMMABLE LIMITS Not Applicable  
(% BY VOL.):

AUTOIGNITION TEMP: > 300°C

DECOMPOSITION TEMP: > 195°C

FIRE EXTINGUISHING MEDIA:

This material will not burn or burns with difficulty.  
Use an extinguishing agent suitable for surrounding  
fires.

FIRE CONTROL TACTICS:

Wear self-contained, positive pressure breathing  
apparatus and full fire fighting protective clothing.

Keep unnecessary people away. Use as little water as  
possible. Dike area of fire to prevent pesticide  
run-off. Use spray or fog - solid stream may cause  
spreading.

Do not decontaminate personnel or equipment, or handle  
broken packages or containers without protective  
equipment as specified in the Exposure Control Section.  
Decontaminate emergency personnel with soap and water  
before leaving the fire area.

Avoid breathing dusts, vapors and fumes from burning  
materials. Control run-off water - if water enters a  
drainage system, advise the authorities downstream.

COMBUSTIBLE DUST/SOLIDS:

This material has been tested in a 20-liter spherical  
bomb and has been found to be a Class ST 1 dust  
explosion hazard. If the material is further processed,  
the dust explosion hazard may change and it should be  
retested.

## NFPA HAZARD

RATING	0 Least	0	Flammability
	1 Slight	/ \	/ \
	2 Moderate	1 0	Health Reactivity
	3 High	\ /	\ /
	4 Severe		Special

## REACTIVITY DATA

STABILITY: Stable

POLYMERIZATION: Will not occur

INCOMPATIBLE MATERIALS: Do not store or mix this product or solutions of this product in unlined steel or aluminum containers.

HAZARDOUS None

DECOMPOSITION

PRODUCTS:

HEALTH HAZARD  
INFORMATIONTOXICITY DATA AND  
EFFECTS OF OVEREXPOSURE:ACUTE TOXICITY DATA:

The acute oral LD<sub>50</sub> for male rats is 6,156 mg/kg and 7071 mg/kg for female rats. The LD<sub>50</sub> for the combined sexes was 6,598 mg/kg indicating that the material is practically non-toxic by ingestion of a single dose.

The dermal LD<sub>50</sub> in both male and female rabbits is greater than 2,000 mg/kg (highest dose tested) indicating the material is no more than slightly toxic by single skin application.

The material is mildly irritating to rabbit eyes with recovery in 72 hours. The material was not a skin sensitizing agent in guinea pig sensitization studies.

Signs of overexposure by ingestion in animal studies included epistaxis, diuresis, salivation, and depression.

CHRONIC TOXICITY DATAMutagenicity:

No mutagenic activity was observed in SCEPTER Tech (imazaquin) by all test methods used. These included Rat Hepatocyte Primary Culture/DNA Repair Test, in vitro Chinese Hamster Ovary (CHO)/Hypoxanthine Guanine Phosphoribosyl Transferase (HGPRT) Mutation Assay,

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Bacterial/Microsome Reverse Mutation (Ames) Test, in vitro Chromosomal Aberrations in Chinese Hamster Ovary Cells.

Teratogenicity:

No teratogenic or fetotoxic effects were found at all dose levels tested in both rats and rabbits.

Carcinogenicity:

No oncogenic effects were observed at all dose levels tested in mice and rats. In a one year dietary study with purebred beagle dogs there were occurrences of histological lesions. These lesions were noted in the high dose group, 5,000 ppm and consisted of degenerative muscle myopathy correlated with elevated CPK values. No other abnormalities were noted.

Imazaquin is not listed as a human carcinogen by the IARC OSHA or NTP.

Note: All reported chronic toxicity testing is done on the technical material only. There is no long term toxicity information on the formulation.

EMERGENCY AND FIRST AID PROCEDURES:

IF IN EYES: Flush with copious amounts of water. Get medical attention if irritation persists.

IF ON SKIN: Wash with soap and water.

IF SWALLOWED: Drink two glasses of water. Induce vomiting if the patient is conscious. Seek medical attention if necessary.

IF INHALED: Remove to fresh air.

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EXPOSURE  
CONTROL METHODS

During formulation of this product, the following good industrial hygiene practice is recommended:

Work shall be conducted in well-ventilated areas.

If (dust concentrations/vapor levels) exceed the recommended PEL, an approved (dust/pesticide) respirator should be worn until engineering controls are achieved.

Chemical goggles or some other form of eye protection must be worn to prevent exposure to the eyes. Wear rubber gloves when handling this material.

Remove contaminated clothing and wash before reuse.

Wash thoroughly with soap and water after handling.

Shower at the end of the work day and change clothing.

Do not eat, smoke, or drink at the workplace.

For end-users, please refer to the product label for personal protective clothing/equipment.

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SPILL OR LEAK  
PROCEDURES

Wearing appropriate protective clothing and equipment (See "Exposure Control" section), dike spill area to prevent product release, absorb with an inert absorbent material, (e.g. granular clay or sawdust), and shovel/sweep into covered containers for proper disposal (see "Waste Disposal" section). Rinse spill area and tools several times with soapy water. Contain and absorb rinsate with inert absorbents and place into the same disposal container as spill residues. Small spills to the soil can be shoveled directly into the disposal containers. In the event of a large spill, contact Cyanamid for guidance on available clean-up options.

Depending on the quantity released to the environment, notifications to regulatory authorities may be required. If spill is to a water body, immediately notify applicable authorities downstream, so that contingencies can be taken, if necessary.

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WASTE DISPOSAL: To avoid disposal, all attempts should be made to use this product completely, in accordance with its registered use. If this is not possible, handle with care, and dispose in a safe manner.

Follow all applicable community, national or regional regulations regarding waste management methods.

Empty containers or liners may retain some product residues. DO NOT REUSE. Triple rinse the container or liner thoroughly and render it unusable by crushing or puncturing. Dispose of both the container and the rinsate in a safe manner.

It is the ultimate responsibility of the waste generator to determine at the time of disposal whether this product and/or "empty" container residue meets any hazardous waste criteria.  
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SPECIAL  
PRECAUTIONS

HANDLING AND STORAGE:

Do not contaminate water, food, or feed by storage or disposal. Store in a secure, dry, well-ventilated separate room, building or covered area.

Not for use or storage in or around the home.

Keep away from sources of ignition and protect from exposure to fire and heat.

Segregate from oxidizers and incompatible materials listed in Reactivity Data section.

Maintain good housekeeping to control dust accumulations.

Due to the dust explosion hazard, all equipment should have explosion venting per NFPA 68-1978. All electrical wiring and equipment should meet the provisions of NFPA-70.

ADDITIONAL REGULATORY INFORMATION

SARA Title III Data

Section 311 and 312 Hazard Categories

Immediate Health Hazard - Y

Reactive Hazard - N

Delayed Health Hazard - N

Sudden Pressure - N  
Release Hazard

Fire Hazard - N

Section 302 Extremely Hazardous Substances - None

Section 313 Toxic Chemicals - None

CERCLA Reportable Quantity

SCEPTER<sup>(R)</sup> 70 DG - None Known

RCRA Hazardous Waste Code(s) And Statement(s)

SCEPTER<sup>(R)</sup> 70 DG - None Known

It is the responsibility of the waste generator to determine if any hazardous waste code(s) apply, prior to disposal.

APPENDIX

SCEPTER<sup>(R)</sup> is a registered trademark of the American Cyanamid Company.

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

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